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1. (Twice Amended) An information storage medium comprising:
a plurality of unit audio information to be reproduced independently of each other;
aggregate audio information each including one or more of the unit audio information;
unit attribute information indicating attributes of the unit audio information included in
the aggregate audio information; and
aggregate attribute information indicating a start address, playback time and attributes of
the unit audio information corresponding to the aggregate audio information
recorded on the storage medium.

2. A medium according to claim 1, wherein the aggregate attribute information is recorded at
a position on the storage medium which is read prior to any other portions.

3. A medium according to claim 1, wherein the aggregate attribute information includes
information of at least a sampling frequency and a quantization bit number used to a
coding of the unit audio information and a channel number.

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4. (Twice Amended) A reproduction apparatus for an information storage medium, the
information storage medium comprising:
a plurality of unit audio information to be reproduced independently of each other;
aggregate audio information each including one or more of the unit audio information;
unit attribute information indicating attributes of the unit audio information included in
the aggregate audio information; and
aggregate attribute information indicating a start address, playback time and attributes of
the unit audio information corresponding to the aggregate audio information
recorded on the storage medium,
and the apparatus comprising:
a reading unit for reading information from the information storage medium;
a storage unit for storing the aggregate attribute information read by the reading unit;

an input unit for receiving, from a user, a reproduction instruction designating a plurality of unit audio information to be reproduced successively; and
a reproduction unit for setting the attribute for the reproduction based on the aggregate attribute information stored in the storage unit and for reproducing the unit audio information designated by the user in accordance with the attribute set, wherein said reproduction unit comprising:
an obtaining unit for obtaining the attribute corresponding to each of the plurality of unit audio information designated by the user from the aggregate attribute information stored in the storage unit;
a determining unit for determining whether or not the obtained attributes of the unit audio information to be successively reproduced are identical; and
an attribute change unit for starting an attribute setting of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced, if the determining unit determines that the attributes are different.

5. An apparatus according to claim 4, wherein the reproduction unit comprising a search unit for transferring the reading unit to a recording position on the information storage medium of the unit audio information to be reproduced next immediately after the reproduction the unit audio information currently reproduced, and for allowing the reproduction unit to start reproduction of the unit audio information to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the reading unit.
6. An apparatus according to claim 5, wherein the waiting time is longer than a time required to change the set attribute by the attribute change unit.

(Twice Amended) A reproduction apparatus for an information storage medium, the information storage medium comprising:

a plurality of unit audio information to be reproduced independently of each other;

aggregate audio information each including one or more of the unit audio information; and

unit attribute information indicating attributes of the unit audio information included in
the aggregate audio information, and

the apparatus comprising:

- a reading unit for reading information from the information storage medium;
- a table producing unit for obtaining the unit attribute information corresponding to the aggregate audio information recorded on the storage medium from the reading unit and for producing an aggregate attribute information table aggregating the unit attribute information collectively, the aggregate information table indicating a start address, playback time and attributes of the unit audio information;
- a storage unit for storing the aggregate attribute information table produced by the table producing unit;
- an input unit for receiving, from a user, a reproduction instruction designating a plurality of the unit audio information to be reproduced successively; and
- a reproduction unit for setting the attribute for the reproduction based on the aggregate attribute information table stored in the storage unit and for reproducing the unit audio information designated by the user in accordance with the attribute set, wherein said reproduction unit comprising:
 - an obtaining unit for obtaining the attributes corresponding to each of the plurality of unit audio information designated by the user from the aggregate attribute information table stored in the storage unit;
 - a determining unit for determining whether or not the obtained attributes of the unit audio information to be successively reproduced are identical; and
 - an attribute change unit for starting an attribute setting of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced, if the determining unit determines that the attributes are different.

assigned
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video + audio
on the way +
new menu structure

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8. An apparatus according to claim 7, wherein the reproduction unit comprising a search unit for transferring the reading unit to a recording position on the information storage medium of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced, and for allowing the reproduction unit to start reproduction of the unit audio information to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the reading unit.
9. An apparatus according to claim 8, wherein the waiting time is longer than a time required to change the set attribute by the attribute change unit.
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10. (Twice Amended) A reproduction method of an information storage medium, the information storage medium comprising:
a plurality of unit audio information to be reproduced independently of each other;
aggregate audio information each including one or more of the unit audio information;
unit attribute information indicating attributes of the unit audio information included in the aggregate audio information; and
aggregate attribute information indicating a start address, playback time and attributes of the unit audio information corresponding to the aggregate audio information recorded on the storage medium,
and the method comprising the steps of:
reading the aggregate attribute information from the information storage medium to store the read information into a storage unit;
receiving, from a user, a reproduction instruction designating a plurality of unit audio information to be reproduced successively;
setting the attribute for the reproduction based on the aggregate attribute information stored in the storage unit; and

reproducing the unit audio information designated by the user in accordance with the attribute set, wherein said reproducing step comprising the steps of:
obtaining the attributes corresponding to each of the plurality of unit audio information designated by the user from the aggregate attribute information stored in the storage unit;
determining whether or not the attributes of the unit audio information to be reproduced successively are identical; and
starting an attribute setting of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced, if it is determined in the determining step that the attributes are different.

11. A method according to claim 10, wherein the reproducing step comprising the steps of:
transferring an information reading position to a recording position on the information storage medium of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced; and
starting reproduction of the unit audio information to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the information reading position.
12. A method according to claim 11, wherein the waiting time is longer than a time required to change the set attribute.
13. (Twice Amended) A reproduction method of an information storage medium, the information storage medium comprising:
a plurality of unit audio information to be reproduced independently of each other;
aggregate audio information each including one or more of the unit audio information; and

unit attribute information indicating attributes of the unit audio information included in the aggregate audio information,
and the method comprising:
reading the unit attribute information corresponding to the aggregate audio information recorded on the storage medium to produce an aggregate attribute information table, the aggregate attribute information table indicating a start address, playback time and attributes of the unit audio information;
storing the aggregate attribute information table produced into a storage unit;
receiving, from a user, a reproduction instruction designating a plurality of unit audio information to be reproduced successively;
setting the attribute for the reproduction based on the aggregate attribute information table stored in the storage unit; and
reproducing the unit audio information designated by the user in accordance with the attribute set, wherein said reproducing step comprising the steps of:
obtaining the attributes corresponding to each of the plurality of unit audio information designated by the user from the aggregate attribute information table stored in the storage unit;
determining whether or not the attributes of the unit audio information to be successively reproduced are identical; and
starting an attribute setting of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced, if it is determined in the determining step that the attributes are different.

14. A method according to claim 13, wherein the reproducing step comprising the steps of:
transferring an information reading position to a recording position on the information storage medium of the unit audio information to be reproduced next immediately after the reproduction of the unit audio information currently reproduced; and

starting reproduction of the unit audio information to be reproduced next after a predetermined waiting time has passed from the start of the transfer of the information reading position.


15. A method according to claim 14, wherein the waiting time is longer than a time required to change the set attribute.

19. (Amended) An information storage medium comprising:
- a plurality of audio packs, each audio pack containing one or more frames of audio data and associated audio pack attribute information;
 - a plurality of audio tracks, each audio track comprising one or more audio packs;
 - a plurality of audio management information areas, each audio management area containing audio attribute information for one or more audio tracks of the plurality of audio tracks; and
 - a centralized audio attribute information area containing an aggregation of the audio attribute information from the plurality of audio management information areas, wherein the centralized audio attribute information area comprises one or more groups of grouped audio attribute information, each group of the grouped audio attribute information including:
 - a group number;
 - one or more track numbers;
 - a start address and an end address of an audio track of the plurality of audio tracks corresponding with each track number; and
 - audio attribute information of the audio track corresponding with each track number.

20. (Canceled)

21. The information storage medium according to Claim 19, wherein the information storage medium is a digital versatile disk and the centralized audio attribute information area is located within a video manager area of the digital versatile disk.
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22. (Amended) A reproduction apparatus for an information storage medium, the information storage medium comprising:
- a plurality of audio packs, each audio pack containing one or more frames of audio data and associated audio pack attribute information;
 - a plurality of audio tracks, each audio track comprising one or more audio packs;
 - a plurality of audio management information areas, each audio management area containing audio attribute information for one or more audio tracks of the plurality of audio tracks; and
 - a centralized audio attribute information area containing an aggregation of the audio attribute information from the plurality of audio management information areas, wherein the centralized audio attribute information area comprises one or more groups of grouped audio attribute information, each group of the grouped audio attribute information including:
 - a group number;
 - one or more track numbers;
 - a start address and an end address of an audio track of the plurality of audio tracks corresponding with each track number; and
 - audio attribute information of the audio track corresponding with each track number,
- and the reproduction apparatus comprises:
- a reading unit for reading information from the information storage medium;
 - a storage unit for storing the aggregation of audio attribute information read by the reading unit;


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 an input unit for receiving, from a user, a reproduction instruction designating a plurality of designated audio tracks to be reproduced successively; and
a reproduction unit for setting audio attributes for the reproduction of the designated audio tracks based on the aggregation of audio attribute information stored in the storage unit and for reproducing the designated audio tracks in accordance with the audio attributes set.

23. The reproduction apparatus according to Claim 22 wherein said reproduction unit comprises:
an obtaining unit for obtaining the audio attributes corresponding to each audio track of the plurality of designated audio tracks from the aggregation of audio attribute information stored in the storage unit;
a determining unit for determining whether or not the obtained audio attributes of the designated audio tracks to be successively reproduced are identical; and
an attribute change unit for changing an audio attribute setting of a next audio track to be reproduced next immediately after the reproduction of a current audio track currently reproduced, if the determining unit determines that the audio attributes are different.
24. The reproduction apparatus according to Claim 23, wherein the reproduction unit further comprises:
a search unit for transferring the reading unit to a track position on the information storage medium of the next audio track after the reproduction of the current audio track, wherein the reproduction unit starts reproduction of the next audio track after a predetermined waiting time has passed from the start of the transfer of the reading unit.
25. The reproduction apparatus according to Claim 24, wherein the waiting time is longer than a time required to change the audio attributes set by the attribute change unit.

26. (Amended) A reproduction method for an information storage medium, the information storage medium comprising:
- a plurality of audio packs, each audio pack containing one or more frames of audio data and associated audio pack attribute information;
 - a plurality of audio tracks, each audio track comprising one or more audio packs;
 - a plurality of audio management information areas, each audio management area containing audio attribute information for one or more audio tracks of the plurality of audio tracks; and
 - a centralized audio attribute information area containing an aggregation of the audio attribute information from the plurality of audio management information areas, wherein the centralized audio attribute information area comprises one or more groups of grouped audio attribute information, each group of the grouped audio attribute information including:
 - a group number;
 - one or more track numbers;
 - a start address and an end address of an audio track of the plurality of audio tracks corresponding with each track number; and
 - audio attribute information of the audio track corresponding with each track number,
- and the method comprising the steps of:
- reading the aggregation of audio attribute information from the centralized audio information area on the information storage medium;
 - storing the aggregation of audio attribute information in a storage unit;
 - receiving, from a user, a reproduction instruction designating a plurality of designated audio tracks to be reproduced successively;
 - setting the audio attributes for the reproduction of the designated audio tracks based on the aggregation of audio information stored in the storage unit; and

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 reproducing the designated audio tracks in accordance with the audio attributes set.

27. The reproduction method of Claim 26, wherein said reproducing step comprises the steps of:

obtaining the audio attributes corresponding to each audio track of the plurality of designated audio tracks from the aggregation of audio attribute information stored in the storage unit;
determining whether or not the audio attributes of the designated audio tracks to be reproduced successively are identical; and
changing an audio attribute setting of a next audio track to be reproduced next immediately after the reproduction of a current audio track currently reproduced, if it is determined in the determining step that the audio attributes are different.

28. The reproduction method of Claim 27, wherein said reproducing step further comprises: transferring a information reading position to a track position on the information storage medium of the next audio track immediately after the reproduction of the current audio track; and
starting reproduction of the next audio track after a predetermined waiting time has passed from the start of the transfer of the information reading position.

29. The reproduction method of Claim 28, wherein the waiting time is longer than a time required to change the attribute setting.
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-  30. (Amended) A reproduction apparatus for an information storage medium, the information storage medium comprising:
a plurality of audio packs, each audio pack containing one or more frames of audio data and associated audio pack attribute information;
a plurality of audio tracks, each audio track comprising one or more audio packs;

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a plurality of audio management information areas, each audio management area containing audio attribute information for one or more audio tracks of the plurality of audio tracks,

and the reproduction apparatus comprising:

a reading unit for reading information from the information storage medium;

a table producing unit for obtaining the audio attribute information from one or more of the audio management information areas and for producing an centralized audio attribute information table aggregating the audio attribute information collectively, the centralized audio attribute information table including a start address, playback time and attributes for each audio track from the audio attribute information;

a storage unit for storing the centralized audio information table produced by the table producing unit;

an input unit for receiving, from a user, a reproduction instruction designating a plurality of designated audio tracks to be reproduced successively; and

a reproduction unit for setting the audio attributes for the reproduction based on the centralized audio attribute information table stored in the storage unit and for reproducing the designated audio tracks in accordance with the audio attributes set.

31. The reproduction apparatus according to Claim 30, wherein said reproduction unit comprises:
- an obtaining unit for obtaining the audio attributes corresponding to each audio track of the plurality of designated audio tracks from the centralized audio information table stored in the storage unit;
- a determining unit for determining whether or not the obtained audio attributes of the designated audio tracks to be successively reproduced are identical; and
- an attribute change unit for changing an audio attribute setting of a next audio track to be reproduced next immediately after the reproduction of a current audio track

currently reproduced, if the determining unit determines that the audio attributes are different.

32. The reproduction apparatus according to Claim 31, wherein the reproduction unit further comprises:
a search unit for transferring the reading unit to a track position on the information storage medium of the next audio track after the reproduction of the current audio track, wherein the reproduction unit starts reproduction of the next audio track after a predetermined waiting time has passed from the start of the transfer of the reading unit.
33. The reproduction apparatus according to Claim 32, wherein the waiting time is longer than a time required to change the audio attributes set by the attribute change unit.
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34. (Amended) A reproduction method of an information storage medium, the information storage medium comprising:
a plurality of audio packs, each audio pack containing one or more frames of audio data and associated audio pack attribute information;
a plurality of audio tracks, each audio track comprising one or more audio packs;
a plurality of audio management information areas, each audio management area containing audio attribute information for one or more audio tracks,
and the method comprising:
reading the audio attribute information from one or more audio management information areas of the plurality of audio management information areas to produce an centralized audio attribute information table containing an aggregation of the audio attribute information, the centralized audio attribute information table including a start address, playback time and attribute for each audio track from the audio attribute information;;
storing the centralized audio attribute information table produced into a storage unit;

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receiving, from a user, a reproduction instruction designating a plurality of designated audio tracks to be reproduced successively;
setting the audio attributes for the reproduction of the designated audio tracks based on the centralized audio attribute information table stored in the storage unit; and
reproducing the designated audio tracks in accordance with the audio attributes set.

35. The reproduction method according to Claim 34, wherein said reproducing step comprising the steps of:
obtaining the audio attributes corresponding to each audio track of the plurality of designated audio tracks from the centralized audio attribute information table stored in the storage unit;
determining whether or not the audio attributes of the audio tracks to be successively reproduced are identical; and
changing an audio attribute setting of a next audio track to be reproduced next immediately after the reproduction of a current audio track currently reproduced, if it is determined in the determining step that the audio attributes are different.
36. The reproduction method of Claim 35, wherein said reproducing step further comprises:
transferring a information reading position to a track position on the information storage medium of the next audio track immediately after the reproduction of the current audio track; and
starting reproduction of the next audio track after a predetermined waiting time has passed from the start of the transfer of the information reading position.
37. The reproduction method of Claim 36, wherein the waiting time is longer than a time required to change the audio attribute setting.

38. (New) An information storage medium comprising:
a first recording area in which a plurality of audio information units and attribute
information of the audio information units are to be recorded;
a second recording area in which centralized audio attribution information of a plurality of
tracks is to be recorded, each track comprising one or more audio information
units,
wherein the centralized audio attribution information includes a start address, playback
time and attribute of each of the tracks.
39. (New) The information storage medium according to claim 38, wherein a plurality of the
tracks comprise a group, and the centralized audio attribution information further includes
a group number and a track number of the track.
40. (New) The information storage medium according to claim 38, wherein the second
recording area includes menu data for presenting a menu of contents recorded in the
information storage medium.
- 41 (New) A reproduction apparatus for an information storage medium comprising:
a first recording area in which a plurality of audio information units and attribute
information of the audio information units are recorded;
a second recording area in which centralized audio attribution information of a plurality of
tracks is recorded, each track comprising one or more audio information units,
wherein the centralized audio attribution information includes a start address, playback
time and attribute of each of the tracks,
the reproduction apparatus comprising:
a reading unit for reading one or more tracks of the plurality of tracks, the attribute
information of the audio information units associated with the one or more tracks,

and the centralized audio attribute information from the information storage medium; and

a reproduction unit for reproduction of one or more tracks of the plurality of tracks read from the information storage medium by the reading unit, the reproduction of the one or more tracks based on the centralized audio attribute information read from the information storage medium by the reading unit.

42. (New) The reproduction apparatus according to claim 41, wherein a plurality of the tracks comprise a group, and the centralized audio attribution information further includes a group number and a track number of the track.
43. (New) The reproduction apparatus according to claim 41, wherein the second recording area includes menu data for presenting a menu of contents recorded in the information storage medium.